Chapter 5

Getting Ready – Network And ISDN Interface

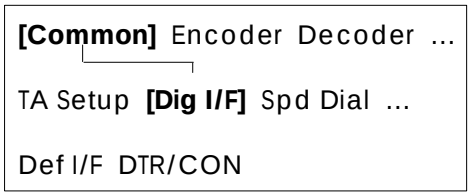
*This chapter discusses all that is needed to interface your **Prima LT** to the digital network*

5. Digital Interface and Terminal Adapter Setup

5.1 Digital Interface Setup

!note:

You can skip this section if your Digital Interface Module was factory installed.



MENU NAVIGATION	COMMAND	WINDOWS RC	DESCRIPTION
<Interface><Dig Interface> <*type*><DTR/CON>	CDT	Setup, Digital Interface	Set state of the DTR/CON line
<Interface>	CIF	Setup, Digital Interface	Select digital interface type

The ***CDQPrima*** must have at least one digital interface to operate. 200 Series models can have up to three interfaces. There are several types of digital interfaces, classified as TA (Terminal Adapter) and non-TA types. A TA type of digital interface is one that is capable of directly connecting to the ISDN line and dialing. In all 200 series models, you can mix TA and non-TA types.

There are two different internal TAs currently available for the ***CDQPrima***, TA201 and TA301. Support is provided for the older TA101, discontinued in 1996 (still available in Australia), but these

terminal adapters are no longer available from MUSICAM USA. There are several different Non-TA type interfaces that can be used with the ***CDQPrima***:

- X.21
- RS422
- V.35

The RS422 and X.21 protocols have the same voltage levels and thus both share the same interface card, the DIF101. Setting jumper P4 on the DIF card makes the distinction between them. Position 1 and 2 should be shorted for X.21 operation, and position 2 and 3 should be shorted for RS422.

The V.35 standard specifies different voltage levels and hence must use a different type of line interface IC. The interface card used for this standard, the DIF102, is therefore different from the interface card for the X.21/RS422 standard.

!note:

A digital interface must be defined before it can be used.

The **CIF** command,

<Common><Dig I/F><Def I/F>

is used to define and enable the type of digital interface that has been installed in the ***CDQPrima***. Please remember that each installed interface card has two ports, and that each port must be defined.

Some models of external terminal adapters can use the state of the DTR/CON line to terminate a connection. If your external terminal adapter or CSU/DSU can do this, use the X.21XTA or V.35XTA setting, whichever is appropriate. This enables the user to terminate the connection by pressing the END key on the front of the ***CDQPrima***. Otherwise, use the X.21 or V.35 setting.

On some non-TA interfaces, there is a signal designated DTR for the V.35 interface and CON for the X.21 interface. These are control lines from the ***CDQPrima*** interface card to the external terminal adapter equipment. The levels of these lines are controlled by the **CDT** command,

<Common><Dig I/F><DTR/CON>.

Some external ISDN terminal adapters and Switched-56 CSU/DSUs require that the DTR/CON line is asserted. The **CDT** command provides an easy method of controlling the state of the DTR/CON line.

If an internal terminal adapter is not used, you can skip the remainder of this chapter. If a TA201 or TA301 is used, you can skip to sections 5.3 or 5.4

If your ***CDQPrima*** was delivered with the digital interface installed by the factory, the modules have already been set up. You should, however, check to see that non-TA type interfaces have been set up properly for your application. In addition, after any reset of default values, you will have to re-install all DIF modules.

5.2 Terminal Adapter TA101 Configuration.

The TA101 terminal adapter provides one S/T interface for one ISDN BRI (2 x 64 kb/s) line. In North America, the Telco provides a 'U' interface; therefore, an external NT-1 must be used between the ***CDQPrima*** and the wall jack. Elsewhere, the Telco provides an S/T interface and an external NT-1 is not needed.

!note:

The TA101 requires country specific ROM chips for use in different countries. Please contact MUSICAM USA, CCS-Europe or your local distributor for information if you plan to take your ***CDQPrima*** to a different country.

[Common] Encoder Decoder ...

[TA Setup] Dig I/F Spd Dial ...

[DIFs] TA Cnfgs Conn Time ...

Sw type SPID ID Lcl Chk Reset I/F ... (these selections under DIFs)

MENU NAVIGATION	COMMAND	WINDOWS RC	DESCRIPTION
<Common><TA Setup><DIFs> <Inband>	CIB	TA, Settings	Set Inband for internal TA
<Common><TA Setup><Difs> <Lcl Chk>	CLC	TA, Settings	Set TA local check
<Common><TA Setup><DIFs> <ID> <Common><TA Setup><DIFs> <MSN>	CLD	TA, Settings	Set ID for a Terminal Adapter Set MSN for European TA
<Common><TA Setup><DIFs> <LLC>	CLL	TA, Settings	Set LLC state (United Kingdom)
<Common><TA Setup><DIFs> <Sub addr> <Common><TA Setup><DIFs> <EAZ>	CSA	TA, Settings	Set sub-address for a terminal adapter. Set EAZ for 1TR6 switch (Germany)

MENU NAVIGATION	COMMAND	WINDOWS RC	DESCRIPTION
<Common><TA Setup><DIFs><SPID>	CSI	TA, Settings	Set SPID for a Terminal Adapter
<Common><TA Setup><DIFs><Sw type>	CSW	TA, Settings	Set switch type
<Common><TA Setup><DIFs><I/F>	CTF	TA, Settings	Set TA interface mode
<Common><TA Setup><DIFs><Reset>	CTR	N/A	Reset the internal terminal adapter

Probably the most confusing aspect of ISDN codecs is configuring the Terminal Adapter for the ISDN in your area. This is especially true in North America, where there are several local 'flavors' of ISDN that are all provisioned differently. Elsewhere, configuration of the terminal adapter may be as simple as insuring the proper ROM chip is installed for the country where the ***CDQPrima*** is being used.

In North America, the ISDN service provider must supply certain information to correctly configure the Terminal Adapter:

- Switch Manufacturer, e.g. AT&T, Seimens, Northern Telecom
- ISDN 'Flavor', e.g. National ISDN or Custom Point-to-Point. **Please note that Custom Point-to-Multipoint will not work with the TA101 terminal adapter**.
- Service Provider Identification Numbers (SPID numbers). National ISDN *always* requires SPID numbers, some locations using Custom Point-to-Point may *not* require SPID numbers. If SPID numbers are required, most areas use two, but some implementations require only one.

5.2.1 Switch Type (North America and Germany Only)

It is necessary to tell the TA101 what type of switch protocol is being used at the Telco central office. The ISDN service provider will give this information to you. You only need to set the switch type once for each TA since the switch governs both 'B' channels. Go down the

<Common><TA Setup><DIFs><Sw type>

branch, selecting the desired DIF, then select the appropriate switch type. The **CSW** command is used for setting the switch type from a terminal.

In North America, four switch settings are available:

- **5E6** is used for **AT&T Custom Point-to-Point** ISDN version 5E6 or earlier. If your service provider can only provide Custom Point-to-Multipoint, you must use a TA201 or TA301 terminal adapter.
- **5E8** is used for **AT&T Custom Point-to Point** ISDN version 5E8 or later. If your service provider can only support Custom Point-to-Multipoint, you must use a TA201 or TA301 terminal adapter.
- **NTI** is used when the switch is a **Northern Telecom** DMS-100.
- **NI1** is used for all other National-ISDN-1 implementations, **including AT&T**.

German users have three choices, DSS1, 1TR6 and AUTO (AUTO will not work if a PBX is used). Contact CCS-Europe for information on which to use in your area.

!note:

Special Notes for Switch Type 5E6 and 5E9.1 Custom Point-to-Point (North America Only):

> If your service provider tells you that the switch type is an AT&T 5ESS with software version 6 or earlier, you cannot enter a SPID and ID number since these are not supported. Since SPID and ID numbers are not entered, you must tell the ***CDQPrima*** not to look for them, by turning Local Check (<Common><TA Setup><DlFs><Lcl Chk>) to NONE. **When SPIDs are not used, Line 2 may answer incoming calls first.**
>
> If your service provider says your 5ESS switch is running software version **5E9.1** in Custom Point-to-Point configuration, they may give you SPID numbers. On the ***CDQPrima***, select switch type 5E8, do not enter the SPID numbers, but enter the ID numbers and local check values. A TA reset may or may not result in a "SP1 BAD SP2 BAD" message. **When dialing, '1 + area code' dialing is required, even for local calls.**

5.2.2 Service Provider ID (SPID) Number (North America Only)

For *most* areas in North American, the TA must be told the SPID number of the *calling* ISDN line; that is, the line connected to the ***CDQPrima***. The ISDN service provider in your area provides this number to you. **It is important to remember that every time the *CDQPrima* is moved, or whenever there is a change in the ISDN line, or even area code changes, the SPID and ID number, switch type and**

!note:

possibly other parameters for the TA setup must be updated. You can store up to 20 ISDN location configurations for later recall.

To set the SPID number using the keypad, go down the branch

<Common><TA Setup><DIFs><SPID>

selecting the desired DIF, and follow the prompts to enter the SPID number for all connected TAs. **Please note also, that each TA supports 2 basic rate ISDN 'B' channels, so if your service provider gave you two SPID numbers, you must enter both of them, one for each 'B' channel** (DIF). Use the **CSI** command to set the SPID number from a terminal. See the ***CDQPrima*** Remote Control Manual for details.

5.2.3 Identification (ID) Number (North America Only)

If you are required to use two SPID numbers, than you must use ID numbers. **For the TA101, the ID number is just the last 4 digits of the ISDN line number connected to the *CDQPrima***. Use the

<Common><TA Setup><DIFs><ID>

branch, and follow the prompts to set the ID from the keypad. Use the **CLD** command from a terminal.

5.2.4 Multiple Subscriber Number (MSN — Europe Only)

If you have selected the DSS1 switch type in Germany, than MSNs must also be used. Use the

<Common><TA Setup><DIFs><MSN>

or use the **CLD** command.

5.2.5 Local Check (North America Only)

If you are required to use ID numbers, you must also set the Local Check values. Local check tells the TA101 which internal buffers to check for the ID number. To set this parameter, branch down

<Common><TA Setup><DIFs><Lcl Chk>

enter the DIF number, then enter the number of the buffer that contains the ID number. You can use the **CLC** command from the terminal. The Local Check values for all odd-numbered DIFs must be set to 'T5' and all even-numbered DIFs get set to 'T6'. If IDs are not used, local Check must be set to 'NONE' for all installed DIFs.

5.2.6 LLC State (United Kingdom and North America)

In some areas of the United Kingdom it may be necessary to toggle the state of the Low Level Command mode. If making calls is difficult or unpredictable, use the LLC command

<Common><TA Setup><DIFs> <LLC>

command for to toggle the state.

In North America, setting the LLC state ON allows 56 kb/s dialing

5.2.7 Sub Address, EAZ (Germany), Interface Mode and Inband

The sub-address for an S/T interface TA (TA101) is set by the **CSA** command

<Common><TA Setup><DIFs><*Sub addr/EAZ*>.

This command is used when a ***CDQPrima*** is connected to a digital PBX. If the TA101 is directly connected to an NT1, then the sub-address should be set to 0. Subaddresses are generally not used in North America. In Germany, when using the 1TR6 switch type, subadresses are required. Use the **CSA** command to set the EAZ sub address.

The **CTF** command

<Common><TA Setup><DIFs><Interface>

sets the interface mode of the internal TA101. **For North American operation of the TA101, the interface mode should always be set to IGNORE**. For operation elsewhere, initially start with the mode set to IGNORE. If you have problems making or receiving calls, then set the mode to ACTIVE.

The **CIB** command

<Common><TA Setup><DIFs><Inband>

controls inband signaling and enables the factory to remotely control your ***CDQPrima***'s TA101 terminal adapter for maintenance purposes. Normal operation requires **CIB OFF.**

All of the terminal adapter parameters discussed so far can be entered at the same time when using the available Windows Remote Control program. A sample window is shown here, and is reached by clicking on 'TA' and

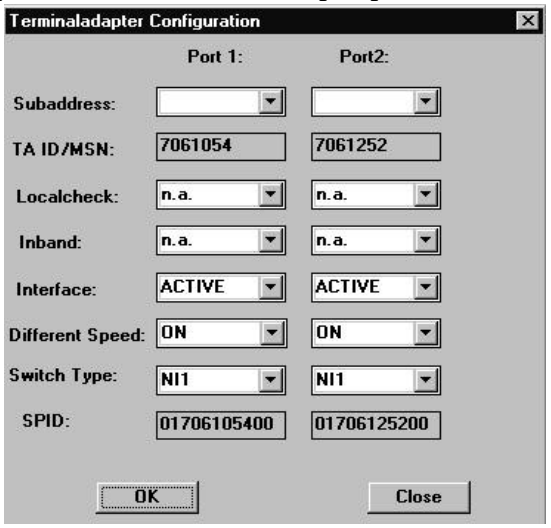


Figure 5-3 Terminal Adapter Configuration Window

5.2.8 Reset

After the above parameters have been set, it is necessary to reset the TA101 Terminal Adapter. The **CTR** command is used to reset the internal terminal adapter and to check if the SPID and ID numbers have been entered correctly for North American operation. To reset the terminal adapters from the keypad, use the sequence

<Common><TA Setup><DIFs><Reset>

selecting the appropriate DIF. **The reset process takes from 20 to 40 seconds to complete, and the response will flash for 2 seconds on the *top line* of the LCD display.** The following responses are possible:

- SP1 OK SP2 OK — SPID 1 and SPID 2 initialized properly
- SP1 OK SP 2 BAD — SPID 1 initialized, SPID 2 did not
- SP1 BAD SP2 OK — SPID 1 did not initialize, SPID 2 did
- SP1 BAD SP2 BAD — Both SPIDs did not initialize.

If you require two SPID numbers, and if you get any response other than the first, your TA101 has not been configured properly and you will not be able to make or receive calls. If only one, or no SPID numbers are required, then any response may be OK. Try dialing and see if you can connect to another codec. If you get a bad response, or you cannot dial, please refer to the Troubleshooting section in the ***CDQPrima*** Technical Reference Manual before calling for assistance.

5.3 Terminal Adapter TA201 and TA301 Configuration for North America

[Common] Encoder Decoder ...

[TA Setup] Dig I/F Spd Dial ...

[DIFs] TA Cnfgs Conn Time ...

[N. America] Germany France U.K. Japan

Sw type SPID ID Reset I/F Sub addr (these selections under N. America)

MENU NAVIGATION	COMMAND	WINDOWS RC	DESCRIPTION
<Common><TA Setup><DIFs>	CCC	N/A	Define country for TA
<Common><TA Setup><DIFs> <N. America><ID>	CLD	TA, Configuration	Set ID for a Terminal Adapter
<Common><TA Setup><DIFs>	CSA	TA,	Set sub-address for a Terminal

MENU NAVIGATION	COMMAND	WINDOWS RC	DESCRIPTION
<N. America><Sub addr>		Configuration	Adapter.
<Common><TA Setup><DIFs> <N. America> <SPID>	CSI	TA, Configuration	Set SPID for a Terminal Adapter
<Common><TA Setup><DIFs> <N. America><Sw type>	CSW	TA, Configuration	Set switch type
<Common><TA Setup><DIFs> <N. America><I/F>	CTF	TA, Configuration	Set TA interface mode
<Common><TA Setup><DIFs> <N. America> <Reset>	CTR	N/A	Reset the internal terminal adapter

The TA201 terminal adapter provides one S/T interface for one ISDN BRI (2 x 64 kb/s) line. In North America, the Telco provides a 'U' interface, therefore an external NT-1 must be used between ***CDQPrima*** and the wall jack. Elsewhere, the Telco provides an S/T interface and an external NT-1 is not needed. The TA201 contains all country specific configuration and provisioning information in memory, and there is no need to change ROM chips when using your ***CDQPrima*** in a different country.

The TA301 is similar the TA201 except that it contains a built-in NT-1 and connects directly to the ISDN 'U' interface provided in North America.

Probably the most confusing aspect of ISDN codecs is configuring the Terminal Adapter for the ISDN in your area. This is especially true in North America, where there are several local 'flavors' of ISDN that are all provisioned differently. Elsewhere, configuration of the terminal adapter may be as simple as insuring the proper country is selected.

In North America, the ISDN service provider must supply certain information to allow you to correctly configure the Terminal Adapter:

- ISDN 'Flavor', e.g. National ISDN or Custom.
- Service Provider Identification Numbers (SPID numbers). National ISDN *always* requires SPID numbers; some locations using Custom ISDN may *not* require SPID numbers. If SPID numbers are required, most areas use two, but some implementations require only one.

5.3.1 Select Country

Since the TA201/TA301 have all country specific protocols in ROM, you must select which of these protocols to use. Use the keypad sequence

<Common><TA Setup><DIFs><*country*>

or the **CCC** command.

5.3.2 Switch Type

It is necessary to tell the TA what type of switch protocol is being used at the Telco central office. The ISDN service provider will give this information to you. You need to set the switch type only once for each TA since it is impossible to have different switch types for the individual "B" channels in an ISDN line. Go down the

<Common><TA Setup><DIFs><N. America><Sw type>

branch then select the appropriate switch type, either National or AT&T Custom. The **CSW** command is used for setting the switch type from a terminal.

!note:

Select '5ESS CUST' only for AT&T custom point-to-point or point-to-multipoint ISDN service available in a limited number of areas in the United States. For all other ISDN service, including AT&T National ISDN, select 'NI1'.

5.3.3 Service Provider ID (SPID) Number

For *most* areas in North American, the TA must be told the SPID number of the *calling* ISDN line, that is, the line to which the ***CDQPrima*** is plugged into. The ISDN service provider in your area provides this number to you. **It is important to remember that every time the *CDQPrima* is moved, or whenever there is a change in the ISDN line, or even area code changes, the SPID and ID number, switch type and possibly other parameters for the TA setup must be updated.** You can store up to 20 ISDN location configurations for later recall.

To set the SPID number using the keypad, go down the branch

<Common><TA Setup><DIFs><N. America><SPID>

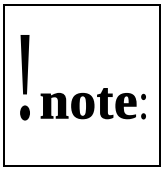
selecting the desired DIF, and follow the prompts to enter the SPID number for all connected TAs. Please note also, that each TA supports 2 basic rate ISDN "B" channels, so if your service provider gave you two SPID numbers you must enter both of them, one for each 'B' channel. Use the **CSI** command to set the SPID number from a terminal.

If SPIDs are not used in your area, line 2 may answer the first incoming call, line 1 will answer the second.

5.3.4 Identification (ID) Number

If you are required to use two SPID numbers, then you must use ID numbers. **For the TA201 and 301, the ID number is just the 7 digit ISDN line number connected to the *CDQPrima*.** Use the

<Common><TA Setup><DIFs><N. America><ID>

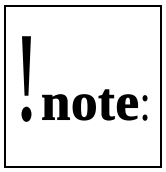


branch, and follow the prompts to set the ID from the keypad. Use the **CLD** command from a terminal.

The TA201 and TA301 use a 7-digit ID number for North American operation.

At this point, all required information has been entered. You will only need to continue the programming sequence if your ISDN service is not functioning properly or if your TA201 was previously used in a different country. Press the up arrow button to reach the top of the menu tree to exit the programming sequence.

5.3.5 Sub-Address And Interface Mode



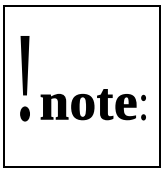
The sub-address for the TA201 and TA301 is set by the **CSA** command. This command is used when a ***CDQPrima*** is connected to a digital PBX. If the TA201 is directly connected to an NT1, then the sub-address should be set to 0. Sub-addresses are generally not used in North America. Use the **CSA** command

<Common><TA Setup><DIFs><N. America><Sub addr>

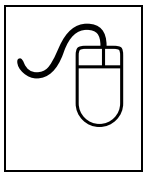
to set the sub-address if required.

The **CTF** command

<Common><TA Setup><DIFs><N.America><I/F>



sets the interface mode of the internal TA201 and TA301. **For North American operation with the TA201 or TA301 the mode should always be set to ACTIVE**. For operation elsewhere, initially start with the mode set to ACTIVE. If you have problems making or receiving calls, then set the mode to IGNORE.



All of the terminal adapter parameters discussed thus far can be entered at the same time when using the available Windows Remote Control program. A sample window is shown in Figure 5-3, and is reached by clicking on 'TA' and then 'Setup'.

5.3.6 Reset

After the above parameters have been set, it is necessary to reset the terminal adapter. The **CTR** command

<Common><TA Setup><DIFs><N. America><Reset>

is used to reset the internal terminal adapter. The TA201 and TA301 currently return no information after a reset. **Please note that a complete reset of the TA201 and TA301 terminal adapters takes about 45 seconds,** and you should not attempt to dial before the reset is complete.

5.4 Terminal Adapter TA201 Configuration, Non-North American Operation

[Common] Encoder Decoder ...

[TA Setup] Dig I/F Spd Dial ...

[DIFs] TA Cnfgs Conn Time ...

N. America Germany France U.K. Japan

Sw Type LDN Reset I/F Sub addr LB LLC (these selections under Germany, France U.K & Japan)

MENU NAVIGATION	COMMAND	WINDOWS RC	DESCRIPTION
<Common><TA Setup><DIFs>	CCC	N/A	Define country for TA
<Common><TASetup><DIFs> <*country*><LDN>	CLD	TA, Configuration	Set LDN/MSN for a Terminal Adapter
<Common><TA Setup><DIFs> <*country*><CLL>	CLL	TA, Configuration	Set LLC state (United Kingdom)
<Common><TA Setup><DIFs> < *country* ><Sub addr>	CSA	TA, Configuration	Set sub-address for a Terminal Adapter
<Common><TA Setup><DIFs> < *country* ><Sw type>	CSW	TA, Configuration	Set switch type
<Common><TA Setup><DIFs> < *country* ><I/F>	CTF	TA, Configuration	Set TA interface mode

MENU NAVIGATION	COMMAND	WINDOWS RC	DESCRIPTION
<Common><TA Setup><DIFs> < *country* ><Reset>	CTR	N/A	Reset the internal terminal adapter

The TA201 terminal adapter provides one S/T interface for one ISDN BRI (2 x 64 kb/s) line. The TA201 contains all country specific configuration and provisioning information in memory, and there is no need to change ROM chips when using your ***CDQPrima*** in a different country. Use the Germany setting for most of Europe, except France and the U.K.

5.4.1 Select Country

Since the TA201 has all country specific protocols in ROM, you must select which of these protocols to use. Use the keypad sequence

<Common><TA Setup><DIFs><*country*>

or the **CCC** command. **For countries not specified in the selections, try using Germany, with DSS1 Switch type. For Pacific-Rim countries, try using Japan settings.**

5.4.2 Switch Type (Germany Only)

It is necessary to tell the TA what type of switch protocol the PTT central office is using. The ISDN service provider will give this information to you. You only need to set the switch type once for each TA the switch governs both 'B' channels in an ISDN line. Go down the

<Common><TA Setup><DIFs><*country*><Sw type>

branch, selecting the desired DIF, then select the appropriate switch type, either DSS1 or 1TR6. The **CSW** command is used for setting the switch type from a terminal.

5.4.3 LDN / MSN Number

The MSN (Multiple Subscriber Number) allows you to connect several codecs (terminal adapters) to one ISDN bus if the DSS1 Euro-ISDN protocol is used. Each TA201 interface requires two MSN numbers, one for each 64 kb/s channel. You do not need to enter the whole MSN, you just have to enter the last different digits. For example, if your MSN for line 1 is 8115517571 and for line 2 is 8115517581, then you only need to enter '71' and '81' for the MSNs.

5.4.4 Sub-Address And Interface Mode

Sub-addresses are required when using the German 1TR6 switch protocol. Like the MSN used with DSS1, the sub-address enables you to connect several codecs (terminal adapters) to the same ISDN bus. For every terminal adapter, you need two sub addresses (EAZ numbers), one for each 64 kb/s channel, numbers between 1 and 8.

The ***CDQPrima***'s interface mode has a different meaning for the TA201 terminal adapter when not used in North America. Try setting the interface mode to ACTIVE, and if you have trouble making or receiving calls, set the interface mode to IGNORE.

All of the terminal adapter parameters discussed so far can be entered at the same time when using the available Windows Remote Control program.

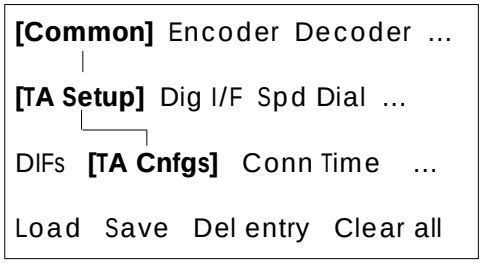
5.4.5 LLC (Low Level Command) State (UK Only)

It is only necessary to set the LLC state in the United Kingdom. Different areas in the UK require different settings. If your TA201 cannot dial properly with the default setting, toggle the setting. Remember that you must set each DIF to the proper state.

5.4.6 Reset

After the above parameters have been set, it is necessary to reset the TA201 Terminal Adapter. The **CTR** command is used to reset the internal terminal adapter. The TA201 and TA301 currently return no information after a reset. **Please note that a complete reset of the TA201 terminal adapter takes about 45 seconds,** and you should not attempt to dial before the reset is complete.

5.5 Terminal Adapter Configuration Storage and Recall



MENU NAVIGATION	COMMAND	WINDOWS RC	DESCRIPTION
<Common><TA Setup>	CTA	N/A	Loads a previously stored

MENU NAVIGATION	COMMAND	WINDOWS RC	DESCRIPTION
<TA Cnfgs><Load>			TA configuration
	CTA	N / A	Prints first stored TA configuration
	CTB	N / A	Display TA configuration description
<Common><TA Setup><TA Cnfgs><*Del entry/clear all*>	CTD	N / A	Erases one or all stored TA configuration
<Common><TA Setup><TA Cnfgs><Save>	CTE	N / A	Saves the current TA configuration
	CTN	N / A	Prints next stored TA configuration

It is possible to store up to 20 terminal adapter configurations for later recall. This feature makes it easy to reconfigure your terminal adapter when your ***CDQPrima*** is used in multiple locations. Each stored configuration includes up to two SPID and ID numbers, local check values, switch types, sub-addresses and all relevant TA setup parameters.

Once your TA has been configured and is working properly, we recommend that you store that configuration for later recall using the **CTE** command.

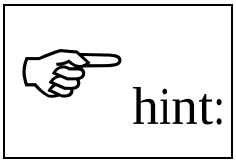
<Common><TA Setup><TA Cnfgs><Save>

You will be asked to enter a descriptive name, up to 20 characters (no spaces), and the ***CDQPrima*** will assign an identification number to the entry. To recall the configuration, use the **CTA** command.

<Common><TA Setup><TA Cnfgs><Load>.

To delete one or all of the stored configurations use the **CDT** command. To list all stored configurations on a terminal, use the **CTA, CTB** and **CTN.**

Please note that you can reload a stored configuration only into the same type of TA. You cannot save a TA101 configuration and reload it into a TA201



We recommend that you always save your TA configuration after you are satisfied that it works. This will save you time and effort if you must later reload the configuration.

5.6 Other TA Parameters

[Common] Encoder Decoder ...

[TA Setup] Dig I/F Spd Dial ...

DIFs TA Cnfgs Conn Time Auto Ans AutoReCon Redial Dial TO RCProtol

LCD Dsply Dspl Time Clr Time Dspl Num (these selections under Conn Time)

MENU NAVIGATION	COMMAND	WINDOWS RC	DESCRIPTION
<Common><TA Setup> <Auto Ans>	CAA	N/A	Set TA auto answer mode
<Common><TA Setup> <AutoReCon>	CAC	TA, Settings	Set TA auto reconnection state
<Common><TA Setup><DIFs> <LB>	CLB		Set digital interface loopback
<Common><TA Setup> <Redial>	CRD	TA, Settings	Set number of redial attempts
<Common><TA Setup> <Dial TO>	CTO	TA, Settings	Set dialing time-out
<Common><TA Setup> <RCProtocol>	CTP	N/A	Set TA remote control protocol usage
N/A	CVR	N/A	Print terminal adapter ROM version

The **CAA** command can be used to switch the TA out of the auto answer mode. If the TA is not in the auto-answer mode, then it will not accept any incoming calls. The factory default is set to auto-answer. This feature is useful if you want to prevent anyone from dialing into your ***CDQPrima***.

!note:

If you call another codec and the connection is lost, it is possible to have the ***CDQPrima*** automatically redial the connection. This is done by setting AutoReCon to YES using the **CAC** command. This is a very powerful feature when less than ideal lines are used. **Remember, however, that when this feature is enabled, only the calling *CDQPrima* can terminate the connection.**

The **CRD** command (Redial) sets how many times the ***CDQPrima*** will attempt to establish connection before giving up. The factory default is 1 redial attempt, i.e.; the ***CDQPrima*** will dial each connection twice. The dial time-out command **CTO** (Dial TO) sets the time that the ***CDQPrima*** waits for a connection to be established before giving up. Regardless of the number of redial attempts selected, you can abort the dialing sequence anytime after the first attempt by pressing the ↑ key.

It is possible to loop back at the internal terminal adapter or other digital interface using the **CLB** command. Digital interface loopback can be used as a troubleshooting tool.

A direct connection from the remote control port to the TA control port is performed by the **CTC** command. This mode of operation is useful because it allows the lowest level of control over the TA. When the **CTC** command is used, all the low-level TA commands are available. Under normal conditions, it should not be necessary to access the TA at this level; however, this is a powerful troubleshooting tool. Consult the factory for a description of these low-level commands. **The CTC command and low-level TA control should not be used without factory assistance, and is only available when using a terminal for remote control.**

The ***CDQPrima*** allows direct connection over ISDN into the ISDN remote control port. This allows complete remote from a far end ***CDQPrima*** via ISDN. The **CTP** command is used to enable or disable command protocol usage over the ISDN line.

The **CVR** command can be used to display the terminal adapter software version for a TA201 or TA301 terminal adapter (ROM version).

5.7 Digital Interface Connect Time And Status

[Common] Encoder Decoder ...

[TA Setup] Dig I/F Spd Dial ...

DIFs TA Cnfgs Conn Time Auto Ans AutoReCon Redial Dial TO ...

LCD Dsply Dspl Time Clr Time Disp Num (these selections under Conn Time)

MENU NAVIGATION	COMMAND	WINDOWS RC	DESCRIPTION

MENU NAVIGATION	COMMAND	WINDOWS RC	DESCRIPTION
<Common><TA Setup> <Conn Time><Dspl Num>	CCD		Get last number dialed and data rate
<Common><TA Setup> <Conn Time><Clr Time>	CCR	N/A	Clear TA digital interface connect time
<Common><TA Setup> <Conn Time><Dspl Time>	CCS	Setup, Digital Interface	Print TA digital interface connect time
<Common><TA Setup> <Conn Time><LCD Dsply>	CDC	N/A	Real-time display TA digital interface connect time on LCD

The ***CDQPrima*** can display the time the line has been connected for any one of the six digital interfaces. This is useful for estimating the cost of the connection. The **CDC** command

<Common><TA Setup><Conn Time><LCD Dsply>

is used to display the connect time on the LCD. The current time connected for any of the six lines can be printed on a remote control terminal by the **CCS** command

<Common><TA Setup><Conn Time><Dspl Time>.

The connect time counter can be set to zero at any time by the **CCR** command

<Common><TA Setup><Conn Time><Clr Time>.

These commands, in conjunction with the **CCD** command

<Common><TA Setup><Conn Time><Dspl Num>

that displays the number and the connected bit rate of the last call, can be used to determine the cost of each call.

5.8 Alphanumeric Characters in Dial String

When using some PBX or international dialing systems it may be necessary to add alphanumeric or punctuation characters to the dialing string.. Under normal circumstances, the alphabetic portion of the keypad is turned off to prevent errors, but can be turned on using the **CKI** command

<Common><Spd Dial><Key in Mode>.